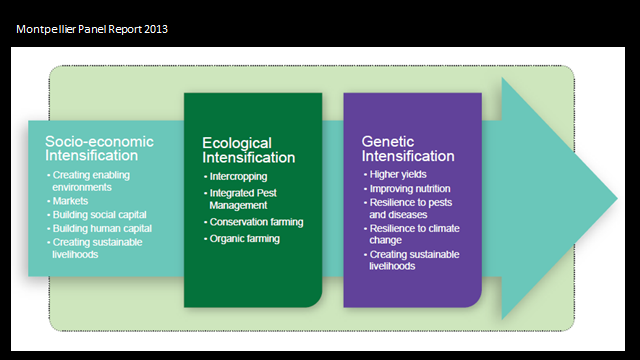
Concept Note: Sustainability Index

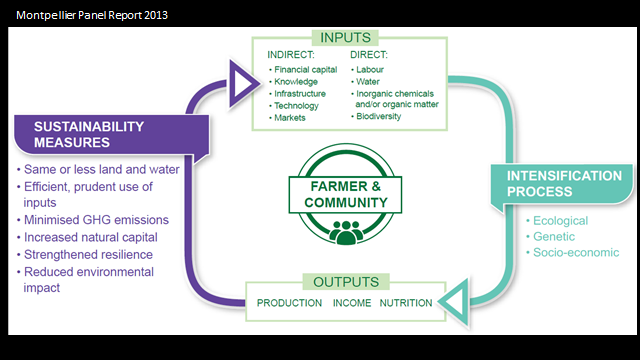
Jerry Glover

July 17th, 2013

Several Africa RISING folks attended the Sustainable Intensification workshop in Accra last week. While there was much useful exchange of information and ideas, I felt one session, comprised of several small group discussions, had particular relevance to Africa RISING's need to establish a small set of clear indicators for the various aspects of SI.

One of the small group discussions during that session focused on the overall concept and components of SI. Overall I think that group came up with roughly similar ideas as have been outlined in previous publications, such as the 2013 Montpellier Panel Report. One important point agreed on by that small group was that "sustainable intensification" is best viewed as a process, not a single endpoint.



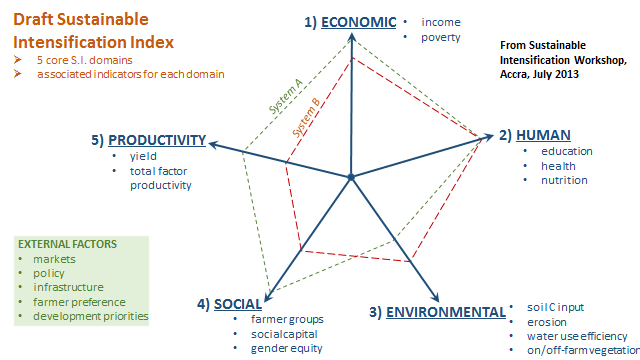


However, as was discussed at the workshop, there are no widely agreed upon indicators for the various 'dimensions' of SI or 'thresholds' or 'benchmarks' for those indicators, which would serve to determine sustainable intensification. Currently, activities are generally determined to be 'sustainable intensification' based on the specific practices, such as conservation agriculture or IPM, rather than based on outcomes. None wish their work to be focused on "unsustainable intensification," therefore everyone's activities are part of "sustainable intensification."

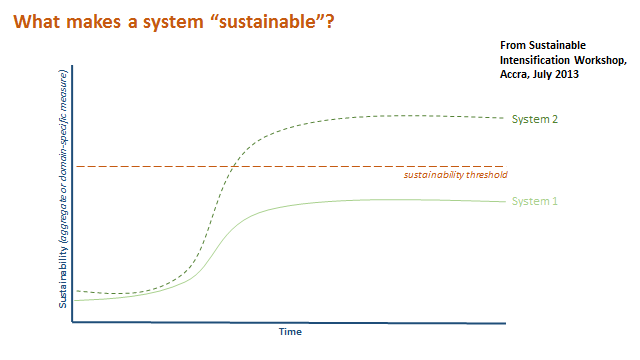
This turns "sustainable" into a non-usable concept (the "intensification" part is, I think, a little easier to pin down, which is maybe why most activities seem to focus on that issue) without real decision-making potential. This was the focus of another small group discussion during that session (see notes below).

I think Africa RISING could be a real leader on this issue, given the broad partnership and diverse geographic coverage. Also, remember that we made little or no progress on developing common sustainability indicators for the program, despite several proddings by Carlo and Beliyou. Perhaps we can take another run at that issue in a more systematic way now that we have come concrete activities on the ground.

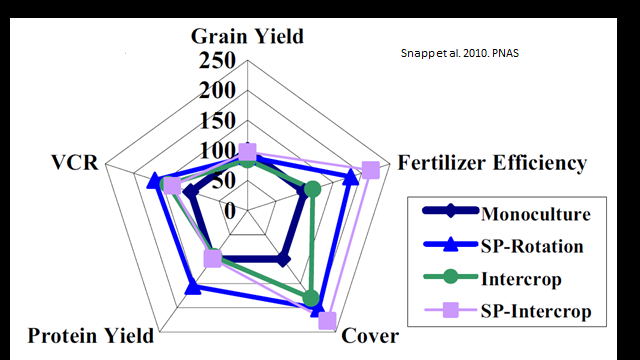
Very briefly, the small group suggested that indicators could be identified for a small set of SI 'dimensions' or 'domains'**.**The group suggested that, to be useful, 4-6 domains with 1 or a few robust, widely measurable indicators for each domain could be identified, together which could be used to determine "sustainable intensification."

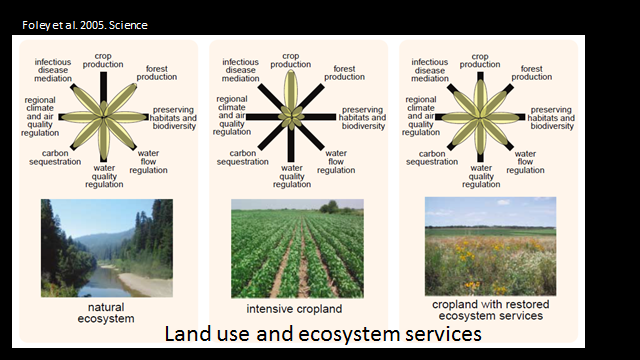


Although perhaps more difficult, thresholds could be determined to further define SI**.**



All of this would need to be context sensitive but it would provide a rationale for selecting specific intensification pathways, some of which might not meet a reasonable definition of SI. There are some examples of similar conceptual frameworks or quantitative analyses along these lines**.**





I think we could (at least for AR) change 'sustainable' into an operable term useful in decision making. From an academic standpoint, developing this concept using some concrete examples would be of great interest to the wider SI community. From a program standpoint, this might be useful in focusing our research activities and analyzing their outcomes. 

**Notes from Sustainable Intensification Workshop, Accra, Ghana July 2013 (Tracy Powell)**

Group 3: How to develop & implement learning-oriented Monitoring & Evaluation?

**Key Challenges** to developing an M&E scheme that integrates evaluation of SI system components, and that permits monitoring/evaluation/comparison of different SI interventions across multiple programs/contexts.

1) The field currently suffers from a fuzzy definition of Sustainable Intensification, with different practitioners defining the boundaries of SI in somewhat different ways. In particular:

a) a qualitative understanding of SI persists *(e.g."*higher productivity per unit input, without degrading the natural resource base")*,* versus uniform, quantitative metrics by which to evaluate SI across multiple systems and system components

b) a practice/method-oriented definition of SI is commonly applied *(e.g.*conservation agriculture, agroforestry, *etc*)*.,* versus an outcome-oriented definition

2) Traditional M&E approaches for agricultural R&D often fail to quantitatively capture the complexity of farming systems, and the integrated nature of any SI approach. In particular, many programs are equipped to monitor the "intensification" aspects of field-level yield enhancement and on-farm productivity, but less equipped to handle the ecological or social "sustainability" component of natural resource impacts, human well-being, *etc.*

a)  traditional agricultural development programs and donor monitoring schemes have focused on productivity/intensification, rather than sustainability, so integrating sustainability metrics has historically not been a high priority

b) the incentives may be wrong for measuring (or achieving) sustainable intensification: in some cases/countries, current political imperatives emphasize intensificationat the expense of sustainability

**Proposed solution**:

Develop a quantitative, outcome-oriented Sustainable Intensification Index. Based on a sustainable livelihoods analysis approach, this M&E framework will support the definition, quantification, comparison, and evaluation of SI interventions/systems across multiple contexts.

a) (See radial diagram.) The draft SI index measures progress along 5 axes required for sustainable intensification of a given system (productivity, economic, environmental, social, and human/health outcomes). Other external factors also influence the farming system, but are not directly quantified by the SI Index.

b) Each SI Index component will be supported by key indicators that represent the best possible proxy measure for the desired SI outcome (e.g. total factor productivity/yield for productivity, diet diversity/health/*etc.* for human well-being). Though we've sketched in a few, the group is interested in crowd-sourcing feedback on what, exactly, these indicators should be. Alternatively, a working group of key SI practitioners might convene to work out the best possibilities.

c) The SI Index should support whatever refined definition/boundaries of SI are developed by Group 1 during the discussion section.

d)The SI Index and accompanying indicators will be flexible, capturing different baseline conditions between various systems and geographic contexts and allowing articulation of different goals and tradeoffs that reflect local, national, CAADP, or other priorities. (*i.e*income over nutrition, or environment over productivity)

e) As a tool to articulate opportunities and tradeoffs in agricultural production, a broadly applied Sustainable Intensification Index would facilitate data sharing between SI practitioners, as well as communication with policymakers and the broader public. It does not replace more in-depth methods of analysis (*e.g.*systems modeling), but fulfills an important function to define the minimum set of system components that must be considered in order for an approach/intervention to be considered "Sustainable Intensification."

In addition to the SI Index, the group discussed the need to define "sustainability thresholds" -- context/system-specific levels that set the minimum criteria for sustainability. (With respect to the proposed Sustainability Index, this could represent a minimum aggregate sustainability value for a given system, but more likely a sustainability cutoff for a given SI component -- e.g. environmental or economic sustainability.)

**Key Partners**: IFPRI and Wageningen are experienced in M&E and farming systems characterization/modeling; University of Queensland, Africa RISING, and many others have applied sustainable livelihoods analyses such as the one we described -- any/all of these could supply useful expertise with respect to these types of metrics. The assemblage of SI practitioners at this meeting also represents a crucial community of practice that can help refine the proposed Index, and potentially promote or apply it across multiple SI programs/projects.

**Useful Examples:** As mentioned, a Sustainable Livelihoods analytical approach is not new: researchers from Wageningen, U. Queensland's Daniel Rodriguez of SIMLESA, U Michigan's Sieglinde Snapp of Africa RISING, and others are applying this sort of metric. Additionally, Africa RISING and various Innovation Platforms could potentially provide useful templates for how to link farm-level SI efforts to external factors such as policies, markets, and other efforts to promote an enabling environment (*e.g.*through partnerships and/or involvement with MoAs, the private sector, donor-sponsored value chain and policy programs, *etc.*).